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Original Research Article

Clinical study of ectopic pregnancy at tertiary care center in Haryana, India

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ABSTRACT

Background: Ectopic pregnancy is a life threatening condition in the first trimester of pregnancy. Diagnosis can be done by clinical examination, serum β -HCG and ultrasonography. This retrospective study was done to know the incidence, risk factors, and management of ectopic pregnancy.

Methods: It was a retrospective study conducted on 75 patients of ectopic pregnancy admitted at tertiary care hospital in Haryana from February-2017 to January-2019. Data collected from record room and analysis done.

Results: Total deliveries were conducted were 5064. The incidence of ectopic pregnancy was 1.48%, majority of the women were in the age group of 21-30 (68%), multi-parous (77.32%). The most common risk factor was abortion 33.33%, f/b tubal ligation was 13.13%, medical management of ectopic pregnancy done in 30.66%, 8% were managed by laproscopically and 58.66% by laparotomy.

Conclusions: Safe sexual practices can reduce pelvic infections and ectopic pregnancy incidences. Early diagnosis before tubal rupture can reduce morbidity and mortality in ectopic pregnancy.

Keywords: Amenorrhoea, Ectopic pregnancy, Laparoscopy, Medical management, Risk factors, Salpingectomy

INTRODUCTION

In an ectopic pregnancy, the fertilized ovum is implanted and developed outside the normal endometrial cavity. This is a life threatening condition in the first trimester of pregnancy and one of the commonest cause of maternal mortality in first trimester.¹ In 97% cases, the fallopian tube is the site of implantation, other sites are ovarian, abdominal (primary and secondary), cervical, angular cornual and caesarean scar pregnancy. Various risk factors are associated with ectopic pregnancy like the history of pelvic inflammatory disease (PID), tubal ligation, contraceptive failure, infertility, intra uterine device (IUD) use, previous induced abortions, previous ectopic pregnancy, use of assisted reproductive techniques, smoking and multiple sexual partners.²

Diagnosis of ectopic pregnancy is done by history of amenorrhea, pain abdomen and bleeding per vagina (classic triad), fainting attack history and clinical examination showing cervical motion tenderness, adnexial mass, fullness in the Pouch of Douglas (POD) and investigations, which are serum β -HCG levels, high resolution ultrasonography and in doubtful cases by laparoscopy. Serial serum β -HCG levels are important in the diagnosis of ectopic pregnancy.³ The incidence of ectopic pregnancy are increasing nowadays due to better diagnostic facilities and increased awareness. Aim of this study is to determine the incidence of ectopic pregnancy and to identify the risk factors and management of ectopic pregnancy at a tertiary care hospital.

METHODS

This was a retrospective study conducted in department of Obstetrics and Gynaecology of a tertiary care hospital in Haryana for a period of two years.

Study population

Case sheets of 75 patients of diagnosed ectopic pregnancy who were admitted in labour room and ward were collected from record room for a period from February 2017 to January 2019 and studied for various parameters.

Inclusion criteria

- All cases of diagnosed ectopic pregnancy were taken.

Exclusion criteria

- All intra-uterine pregnancy cases were excluded from study.

This was a retrospective study. Case sheets of all 75 patients of ectopic pregnancy were studied for various parameters like age, parity, risk factors for ectopic pregnancy, clinical presentation, symptoms, general condition at admission and investigations in form of urine for pregnancy test, ultrasonography findings, β -HCG report and mode of management in detail.

Statistical analysis

The data for all parameters were collected, tabulated, and frequency and percentage were analyzed by using Microsoft Excel.

RESULTS

A total of 75 patients of ectopic pregnancy were studied during study period from February-2017 to January-2019. The total number of delivery recorded was 5064 cases. The incidence of ectopic pregnancy in our study was 1.48%. Majority of women were in age group 21-30 (68%) and multifarious (77.32%). Mean age was 27.32 ± 2 years. Age of the youngest patient was 18 year while the oldest was 38 year. Maximum patients were G3 or more (Table 1 and 2).

Table 1: Age wise distribution of ectopic pregnancy cases.

Age in years	No. of cases (75)	Percentage (%)
15-20	09	12
21-25	24	32
26-30	27	36
31-35	08	10.66
36-40	07	9.33

More than 90% women presented with amenorrhea and pain abdomen (94.66% and 90.66% respectively), bleeding per vagina was present in around 65% women, nausea and vomiting were presented in 10.6% and 2.6%, while 4% women presented with history of fainting attacks and abnormal uterine bleeding respectively (Table 3).

Table 2: Gravidity wise distribution of cases.

Gravidity	No. of cases (75)	Percentage (%)
G1	17	22.66
G2	23	30.66
>G3	35	46.66

Table 3: Distribution of cases according to clinical symptoms.

Symptoms	No. of cases	Percentage (%)
Amenorrhea	71	94.66
Pain abdomen	68	90.66
Bleeding per vagina	49	65
Nausea and vomiting	08	10.66
History of fainting attack	02	2.66
Shock	12	16
Abnormal uterine bleeding	03	4

Table 4: Distribution of cases according to general conditions.

General condition	No. Of cases	Percentage (%)
Stable	63	84
Shock	12	16

Table 5: Risk factors in Ectopic pregnancy.

Risk factors	No. of cases	Percentage (%)
Abortion	25	33.33
Previous surgery	05	6.66
PID	05	6.66
Tubal ligation	10	13.3
Infertility treatment history	03	4
Previous ectopic pregnancy	02	2.66
Cu-T insertion history	07	9.33

Note- no identifiable risk factor -18 (24%)

Around 16% women presented with hemodynamically unstable condition (shock) and 84% women presented with stable general condition (Table 4). The most common risk factor was abortion 33.33% followed by tubal ligation 13.33%, History of previous surgery and PID was present in 6.66% each, previous history of ectopic was present in 2.66% and 24% women had no identifiable risk factors except multiparity (Table 5).

Urine for pregnancy test was positive in all women (100%). The ultrasonography, β -HCG were used as a diagnostic aid in 58.66% and 44% women respectively, while the laparoscopic diagnosis was made in 8% case of ectopic pregnancy (Table 6).

Medical management of ectopic pregnancy was done in 30.66% cases, laparoscopy was performed in 8%, whereas failed medical management in 2.66% combined with laparotomy and direct laparotomy in 58.66% women (Table 7) in the present study.

Table 6: Diagnosis of ectopic pregnancy.

Diagnostic modalities	No. of cases	Percentage (%)
Clinical examination and UPT	75	100
B-HCG	33	44
Ultrasonography	44	58.66
Laparoscopy	06	8

UPT: Urine Pregnancy Test

Table 7: Management of ectopic pregnancy.

Mode of management	No. of cases	Percentage (%)
Medical	23	30.66
Failed medical f/b laprotomy	02	2.66
Laproscopy	06	8
Laprotomy	44	58.66

DISCUSSION

Ectopic pregnancy is a life threatening condition in the first trimester of pregnancy. Nowadays, the incidence of ectopic pregnancy is increasing due to better diagnostic facilities and increased awareness. In the present study, the incidence of ectopic pregnancy was recorded around 1.48%, which is comparable to the incidence reported by Kokate H, Prasannajeet et al, (1.33%).⁴ Whereas, the study by Prasanna B, Jhansi CB et al, reported the incidence of ectopic pregnancy at around 1.8%.⁵

Umbilical majority of women in the present study were in the age group 21-30 years (68%) comparable to the study of Gaddgi et al (70.2%).⁶ This is because our patients got married at early age and completed their family and this age group correspond to maximum reproductive activity. In the present study, the multiparous women were 77.32%, while the study of Swami MB et al, reported 64.71%, because multiparous women in their study had multiple risk factors like history of PID and previous surgery.⁷ In the present study, 94.66% women presented with history of amenorrhea, 90.66% with pain abdomen and bleeding per vagina in 65%. In the Padmaja et al, study, women presented with amenorrhea were 87.5%, pain abdomen in 75%, while a study by Tahima S et al women presented with amenorrhea in 93% cases, but the

classical triad of amenorrhea, pain and bleeding was seen only in 40.3% cases.^{8,9} The risk factors associated with ectopic pregnancy in the present study were abortion in 33.33%, tubal ligation in 13.33%, history of PID and previous surgery 6.66% each, previous history of ectopic in 2.66% cases. Study of Behera A et al, reported association of abortion in 46.2% and tubal ligation in 24.7% cases of ectopic pregnancy.¹⁰ Tubal mucosal damage secondary to infection in abortion hampers the embryo transfer activity and causes ectopic pregnancy. Increased incidences of ectopic pregnancy with tubal ligation are because of the faulty technique, post-partum ligation and failure to achieve hemostasis. In a study by Soren et al, the PID was associated in 5.6% and previous history of ectopic pregnancy in 1.39% cases of ectopic pregnancy.¹¹ Tubal involvement in any disease is almost always bilateral so chances of repeat ectopic pregnancy are increased. In our study the clinical diagnosis and urine for pregnancy test were done in all cases and found positive irrespective of period of amenorrhea. Serum β -HCG was done in 44% women of ectopic pregnancy. In the present study, 30.66% women were managed with medical method by giving single dose of injection of methotrexate. All the women with stable general condition, β -HCG less than 3500 IU/L, and gestational sac diameter less than 4 cm, no cardiac activity and no evidence of hemoperitonium were taken for medical management in 2.66% medical management failed and patient landed in laparotomy due to persistence of symptoms and hemodynamic alterations. Laparoscopic salpingectomy was done in 8% and laparotomy was done in 58.66% women. In a study by Suseela TL et al, the medical management was done in 2%, laparoscopic management in 8% and laparotomy in 90% cases of ectopic pregnancy.¹² Post-operative period was uneventful in all women who had undergone laparotomy and no mortality was reported in the present study.

CONCLUSION

Doppler Health education and safe sexual practices are necessary to reduce ectopic pregnancy as these decreases chances of pelvic infections. Increased clinical suspicion, early diagnosis and timely management before tubal rupture have reduced morbidity and mortality in ectopic pregnancy.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- Cunningham FG, LevenoKJ, Bloom SL, Hauth JC, Rouse DJ, Spong CY, et al *Obstetrics.* 23rd ed. New York: McGraw Hill; 2010:238-254.
- Bhavna G, Pathania K, Jindal M, Vohra R, Ahmed M. Risk factors for ectopic pregnancy: a case control

- study in tertiary care center. *J Dental Med Sci.* 2014;13(3):23-7.
3. Home AW, Duncun WC, Critchley HO. The need for serum biomarker development for diagnosis and excluding tubal ectopic pregnancy. *Acta Obstet Gynaecol Scand.* 2010;89:299-301.
 4. Kokate H, Prasannajeet, Kurude V, Ahire B. Clinical study of ectopic pregnancy at tertiary care center in Mumbai. *Int J Recent Advances Multidisciplinary Res.* 2017;4(1):2163-5.
 5. Prasanna B, Jhansi CB, Swathi K, Shaik MV. A study on risk factors and clinical presentation of ectopic pregnancy in women attending a tertiary care center. *Int Arch Integrated Med.* 2016;3(1):90-6.
 6. Gaddagi RA, Chandrashekhar AP. A clinical study of ectopic pregnancy. *J Clin Diagno Res.* 2012;6:867-9.
 7. Swami MB, Sharma P, Tyagi M, Kuswaha R, Harit J. Clinical study of ectopic pregnancy. *J Evolut Med Dent Sci.* 2015;4(86):15057-62.
 8. Padmaja A, Vijaya K, Suresh U, Karanam R. Analysis of 40 cases of ectopic pregnancy to know the changing trends in the etiology and management. *J Evolut Med Dent Sci.* 2018;17(11):06-11.
 9. Tahima S, Daniel M, Solomon P. clinical analysis of ectopic pregnancies in a tertiary care center in Southern India: a six year retrospective study. *J Clin Diagno Res.* 2016;10(10):QC13-QC16.
 10. Behera A, Ghadei R, Bal NR. A Clinical study of ectopic pregnancy in a tertiary care hospital. *Int J Reprod Contracept Obstet Gynecol.* 2018;7(11):4461-64.
 11. Soren M, Patnaik R, Sarangi KB. A clinical study on ectopic pregnancy. *Int J Res Med Sci.* 2017;5(11):4776-82.
 12. Suseela LT, Gunakala CK. A study on management, morbidity and mortality of ectopic pregnancy attending a tertiary care center at Rajiv Gandhi Institute of Medical Sciences General Hospital, Kadapa, Andhra Pradesh, India. *Int J Reprod Contracept Obstet Gynecol.* 2016;5(11):3736-9.

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